



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,353	09/12/2003	Shunsuke Koyama	9319S-000535	6742
27572	7590	12/02/2004	EXAMINER HO, TAN	
HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			ART UNIT 2821	PAPER NUMBER

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/661,353	KOYAMA, SHUNSUKE	
	Examiner	Art Unit	
	Tan Ho	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9 and 18-32 is/are allowed.
- 6) ☒ Claim(s) 1,3-5,10,12,13 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 2,11 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/12/03; 12/15/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Hayes et al (US Patent 6,380,903).

Hayes et al disclose, in figure 4A, an antenna apparatus comprising a ground member 43 having a length along a predetermined directional axis, an invert F antenna element 42 extending in a direction substantially orthogonal to the direction axis and connected to the ground member by a ground portion 45. Since the length of the ground is longer than the length of the radiating element, it is inherent that the length of the ground member is a quarter or more of a wavelength of an electromagnetic wave.

3. Claims 1 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhou (US Patent 6,466,170).

Zhou discloses, in figure 1, an antenna apparatus comprising a ground member 14 having a length along a predetermined directional axis, an invert F antenna element 12 extending in a direction substantially orthogonal to the direction axis and connected to the ground member by a ground portions (20 and 22), a feed portion 18, and a printed wiring board 32. Since the length of the ground is longer than the length of the radiating element, it is inherent that the length of the ground member is a quarter or more of a wavelength of an electromagnetic wave.

4. Claims 1, 4, 5, 10, 13, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Zeijl et al (US Patent 5,802,458).

Van Zeijl et al disclose, in figures 3 and 4, an antenna apparatus for use in a device for cordless radio communication device comprising a ground or shielding member 23 having a length along a predetermined directional axis, an antenna element 26 extending in a direction substantially orthogonal to the direction axis and connected to the ground member, a printed wiring board 21, a ground pattern 22 formed on the printed wiring board and electrically connected to the ground member, and wherein the ground member and the antenna element comprise one piece. Since the length of the ground is longer than the length of the radiating element, it is inherent that the length of the ground member is a quarter or more of a wavelength of an electromagnetic wave.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou.

The patent to Zhou, described above, differs from the claimed invention because it does not disclose the specific electrical length (1/4 wavelength) of antenna element 12. However the quarter wave long of the invert F antenna is well known in the art as that mentioned in column 2, line 9.

Allowable Subject Matter

7. Claims 2, 11, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 6-9, and 18-23 allowed.

Claim 6 recites the ground member and the antenna element which are printed wirings.

Claim 18 recites a connector connection terminal disposed on a side toward which an antenna element main body of the antenna element extends in relation to the printed wiring board.

The patents to Hayes et al, Zhou, and Van Zeijl et al do not teach these limitations.

9. The patents to Wilz, Sullivan et al, Tai et al, del Castillo et al, Honda et al, and Umehara et al are cited as of interest showing the antenna apparatus similar to that disclosed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Ho whose telephone number is (571) 272-1822. The examiner can normally be reached on M-F (8:00AM - 5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TAN HO
PRIMARY EXAMINER